What We Claim Is:

1. A system for providing high connectivity communications over a composite packet-switched optical ring network comprising:

a plurality of nodes, each node further comprising,

an optical crossbar switch connected to said packet-switched optical ring network;

a rapidly tunable laser for serially generating a plurality of packets, each packet being generated at a different wavelength; and

a wavelength stacker for stacking said plurality of serially generated packets to form a composite packet.

2. The system according to claim 1, wherein said wavelength stacker further comprises:

a plurality of optical circulators; and

a plurality of fiber Bragg gratings (FBGs) connected to and sandwiched between said plurality of optical circulators, wherein said plurality of FBGs are cascaded and equally spaced between said plurality of optical circulators.

3. The system according to claim 1, wherein said stacker also operates as an unstacker to recover and re-serialize said plurality of packets from said composite packet.

4. The system according to claim 1, wherein said optical crossbar switch facilitates a composite packet in a photonic time slot that is being propagated on said packet-switched optical

ring network being dropped from said packet-switched optical ring network at a destination node.

5. The system according to claim 1, wherein said optical crossbar switch facilitates said composite packet formed by said stacker being assigned a photonic time slot and added to said packet-switched optical ring network.

6. The system according to claim 1, wherein said optical crossbar switch is wavelength independent.

7. The system according to claim 1, wherein said packet-switched optical ring network is a point-to-point network.

8. The system according to claim 1, wherein said optical crossbar switch facilitates a composite packet in a photonic time slot bypassing a given node depending on a position of said optical switch.

9. The system according to claim 4, wherein said dropped composite packet in said photonic time slot is further distributed to a plurality of user sites connected to said destination node by using Wavelength Division Multiplexing (WDM) techniques according to said constituent wavelengths of said composite packet.

10. The system according to claim 4, wherein said dropped composite packet in said photonic time slot is further detected in parallel.

11. The system according to claim 5, wherein a wavelength not matching a wavelength of a fiber Bragg grating (FBG) bypasses the node transparently.

12. A system for providing high connectivity communications over a packet-switched optical ring network having a plurality of nodes connected thereto comprising the steps of:

means for creating, at one of said plurality of nodes, a composite packet;

means for dropping a composite packet being routed over said packet-switched optical ring network destined for said one of a plurality of nodes of said packet-switched optical ring network from said packet-switched optical ring network;

means for simultaneously adding to said photonic time slot said composite packet created by said one of said plurality of nodes into said packet-switched optical ring network; and

means for routing said time slot comprising said composite packet to a destination node.

13. The system according to claim 12, wherein a wavelength not matching a wavelength of a fiber Bragg grating (FBG) passes through the node transparently.